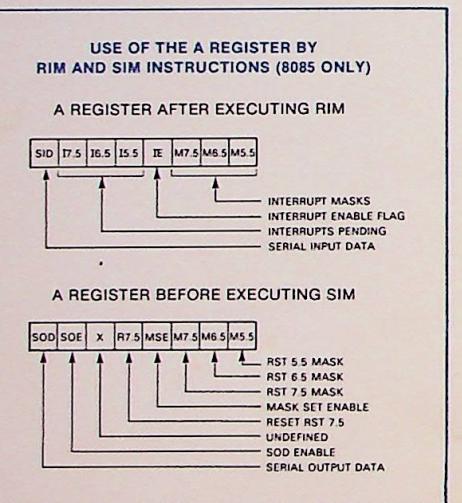


RESTART TABLE

Name	Code	Restart Address
RST 0	C7	000016
RST 1	CF	000816
RST 2	D7	001016
RST 3	DF	001816
RST 4	E7	002016
TRAP	Hardware* Function	002416
RST 5	EF	002816
RST 5.5	Hardware* Function	002C16
RST 6	F7	003016
RST 6.5	Hardware* Function	003416
RST 7	FF	003816
RST 7.5	Hardware* Function	003C16

*NOTE: The hardware functions refer to the on-chip Interrupt feature of the 8085 only.



00	NOP	2B	DCX H	56	MOV D,M	81	ADD C	AC	XRA H	D7	RST 2
01	LXI B,dble	2C	INR L	57	MOV D,A	82	ADD D	AD	XRA L	D8	RC
02	STAX B	2D	DCR L	58	MOV E,B	83	ADD E	AE	XRA M	D9	---
03	INX B	2E	MVI L,byte	59	MOV E,C	84	ADD H	AF	XRA A	DA	JC adr
04	INR B	2F	CMA	5A	MOV E,D	85	ADD L	B0	ORA B	DB	IN byte
05	DCR B	30	SIM*	5B	MOV E,E	86	ADD M	B1	ORA C	DC	CC adr
06	MVI B,byte	31	LXI SP,dble	5C	MOV E,H	87	ADD A	B2	ORA D	DD	---
07	RLC	32	STA adr	5D	MOV E,L	88	ADC B	B3	ORA E	DE	SBI byte
08	---	33	INX SP	5E	MOV E,M	89	ADC C	B4	ORA H	DF	RST 3
09	DAD B	34	INR M	5F	MOV E,A	8A	ADC D	B5	ORA L	E0	RPO
0A	LDAX B	35	DCR M	60	MOV H,B	8B	ADC E	B6	ORA M	E1	POP H
0B	DCX B*	36	MVI M,byte	61	MOV H,C	8C	ADC H	B7	ORA A	E2	JPO adr
0C	INR C	37	STC	62	MOV H,D	8D	ADC L	B8	CMP B	E3	XTHL
0D	DCR C	38	---	63	MOV H,E	8E	ADC M	B9	CMP C	E4	CPO adr
0E	MVI C,byte	39	DAD SP	64	MOV H,H	8F	ADC A	BA	CMP D	E5	PUSH H
0F	RRC	3A	LDA adr	65	MOV H,L	90	SUB B	BB	CMP E	E6	ANI byte
10	---	3B	DCX SP	66	MOV H,M	91	SUB C	BC	CMP H	E7	RST 4
11	LXI D,dble	3C	INR A	67	MOV H,A	92	SUB D	BD	CMP L	E8	RPE
12	STAX D	3D	DCR A	68	MOV L,B	93	SUB E	BE	CMP M	E9	PCHL
13	INX D	3E	MVI A,byte	69	MOV L,C	94	SUB H	BF	CMP A	EA	JPE adr
14	INR D	3F	CMC	6A	MOV L,D	95	SUB L	C0	RNZ	EB	XCHG
15	DCR D	40	MOV B,B	6B	MOV L,E	96	SUB M	C1	POP B	EC	CPE adr
16	MVI D,byte	41	MOV B,C	6C	MOV L,H	97	SUB A	C2	JNZ adr	ED	---
17	RAL	42	MOV B,D	6D	MOV L,L	98	SBB B	C3	JMP adr	EE	XRI byte
18	---	43	MOV B,E	6E	MOV L,M	99	SBB C	C4	CNZ adr	EF	RST 5
19	DAD D	44	MOV B,H	6F	MOV L,A	9A	SBB D	C5	PUSH B	F0	RP
1A	LDAX D	45	MOV B,L	70	MOV M,B	9B	SBB E	C6	ADI byte	F1	POP PSW
1B	DCX D	46	MOV B,M	71	MOV M,C	9C	SBB H	C7	RST 0	F2	JP adr
1C	INR E	47	MOV B,A	72	MOV M,D	9D	SBB L	C8	RZ	F3	DI
1D	DCR E	48	MOV C,B	73	MOV M,E	9E	SBB M	C9	RET	F4	CP adr
1E	MVI E,byte	49	MOV C,C	74	MOV M,H	9F	SBB A	CA	JZ adr	F5	PUSH PSW
1F	RAR	4A	MOV C,D	75	MOV M,L	A0	ANA B	CB	---	F6	ORI byte
20	RIM*	4B	MOV C,E	76	HLT	A1	ANA C	CC	CZ adr	F7	RST 6
21	LXI H,dble	4C	MOV C,H	77	MOV M,A	A2	ANA D	CD	CALL adr	F8	RM
22	SHLD adr	4D	MOV C,L	78	MOV A,B	A3	ANA E	CE	ACI byte	F9	SPHL
23	INX H	4E	MOV C,M	79	MOV A,C	A4	ANA H	CF	RST 1	FA	JM adr
24	INR H	4F	MOV C,A	7A	MOV A,D	A5	ANA L	D0	RNC	FB	EI
25	DCR H	50	MOV D,B	7B	MOV A,E	A6	ANA M	D1	POP D	FC	CM adr
26	MVI H,byte	51	MOV D,C	7C	MOV A,H	A7	ANA A	D2	JNC adr	FD	---
27	DAA	52	MOV D,D	7D	MOV A,L	A8	XRA B	D3	OUT byte	FE	CPI byte
28	---	53	MOV D,E	7E	MOV A,M	A9	XRA C	D4	CNC adr	FF	RST 7
29	DAD H	54	MOV D,H	7F	MOV A,A	A9	XRA D	D5	PUSH D		
2A	LHLD adr	55	MOV D,L	80	ADD B	AB	XRA E	D6	SUI byte		

HEX-ASCII TABLE

00	NUL	21	!	42	B	63	c
01	SOH	22	"	43	C	64	d
02	STX	23	#	44	D	65	e
03	ETX	24	\$	45	E	66	f
04	EOT	25	%	46	F	67	g
05	ENQ	26	&	47	G	68	h
06	ACK	27	/	48	H	69	i
07	BEL	28	(	49	I	6A	j
08	BS	29	)	4A	J	6B	k
09	HT	2A	.	4B	K	6C	l
0A	LF	2B	+	4C	L	6D	m
0B	VT	2C	.	4D	M	6E	n
0C	FF	2D	-	4E	N	6F	o
0D	CR	2E	.	4F	O	70	p
0E	SO	2F	/	50	P	71	q
0F	SI	30	0	51	Q	72	r
10	DLE	31	1	52	R	73	s
11	DC1 (X-ON)	32	2	53	S	74	t
12	DC2 (TAPE)	33	3	54	T	75	u
13	DC3 (X-OFF)	34	4	55	U	76	v
14	DC4 (TAPE)	35	5	56	V	77	w
15	NAK	36	6	57	W	78	x
16	SYN	37	7	58	X	79	y
17	ETB	38	8	59	Y	7A	z
18	CAN	39	9	5A	Z	7B	{
19	EM	3A	:	5B	[	7C]
1A	SUB	3B	:	5C	\	7D	}
1B	ESC	3C	<	5D	]		(ALT MODE)
1C	FS	3D	=	5E	^	(I)	7E
1D	GS	3E	>	5F	—	(—)	7F
1E	RS	3F	?	60	`	(RUB OUT)	
1F	US	40	((	61	a		
20	SP	41	A	62	b		

INTEL CORPORATION
3065 Bowers Avenue
Santa Clara, California 95051
Tel: (408) 987-8080*

INTEL JAPAN CORPORATION
Flower Hill-Shinmachi East Bldg.
1-23-9, Shinmachi, Setagaya-ku
Tokyo 154, Japan
Tel. (03) 426-9261

INTEL INTERNATIONAL
Rue du Moulin a Papier
51-Boite 1
B-1160 Brussels, Belgium
Tel. (02) 660 30 10



8085/8080

Assembly Language

Reference Card

COMPUTERLAND

Of Portland

12020 S.W. Main St.

Tigard, OR 97223 (503) 620-6170

July 1977

DATA TRANSFER GROUP

ARITHMETIC AND LOGICAL GROUP

BRANCH CONTROL GROUP

I/O AND MACHINE CONTROL

ASSEMBLER REFERENCE (Cont.)

INTEL® 8080/8085 INSTRUCTION SET REFERENCE TABLES

BRANCH CONTROL INSTRUCTIONS

Move		Move (cont)		Move Immediate	
MOV	A.A 7F	MOV	E.A 5F	MVI	A. byte 3E
	A.B 78		E.B 58		B. byte 06
	A.C 79		E.C 59		C. byte 0E
	A.D 7A		E.D 5A		D. byte 16
	A.E 7B		E.E 5B		E. byte 1E
	A.H 7C		E.H 5C		H. byte 26
	A.L 7D		E.L 5D		L. byte 2E
	A.M 7E		E.M 5E		M. byte 36
	B.A 47		H.A 67		
	B.B 40		H.B 60		
MOV	B.C 41		H.C 61		Load Immediate
	B.D 42		H.D 62		
	B.E 43		H.E 63		
	B.H 44		H.H 64		
	B.L 45		H.L 65		
	B.M 46		H.M 66		
	C.A 4F		L.A 6F		
	C.B 48		L.B 68		Load/Store
	C.C 49		L.C 69		
	C.D 4A		L.D 6A		
MOV	C.E 4B		L.E 6B		LDAX B 0A
	C.H 4C		L.H 6C		LDAX D 1A
	C.L 4D		L.L 6D		LHLD adr 2A
	C.M 4E		L.M 6E		LDA adr 3A
	D.A 57		M.A 77		STAX B 02
	D.B 50		M.B 70		STAX D 12
	D.C 51		M.C 71		SHLD adr 22
	D.D 52		M.D 72		STA adr 32
	D.E 53		M.E 73		
	D.H 54		M.H 74		
MOV	D.L 55		M.L 75		
	D.M 56		XCHG EB		

byte = constant, or logical/arithmetic expression that evaluates to an 8-bit data quantity. (Second byte of 2-byte instructions).

db16 = constant, or logical/arithmetic expression that evaluates to a 16-bit data quantity. (Second and Third bytes of 3-byte instructions).

adr = 16-bit address (Second and Third bytes of 3-byte instructions).

* = all flags (C, Z, S, P, AC) affected.

** = all flags except CARRY affected; (exception: INX and DCX affect no flags).

† = only CARRY affected.

Add*		Increment**		Logical*	
ADD	A 87	INR	A 3C	ANA	A 7
	B 80		B 04		B A0
	C 81		C 0C		C A1
	D 82		D 14		D A2
	E 83		E 1C		E A3
	H 84		H 24		H A4
	L 85		L 2C		L A5
	M 86		M 34		M A6
	A 8F		B 03		A AF
	B 88		D 13		B A8
ADC	C 89		H 23		C A9
	D 8A		SP 33		D AA
	E 8B		A 8E		E AB
	H 8C		B 8C		H AC
	L 8D		L 8E		L AD
	M 8E		A 3D		M AE
	B 05		B 05		A B7
	C 0D		C 0D		B B0
	D 15		D 15		C B1
	E 1D		E 1D		D B2
XRA	H 25		H 25		E B3
	L 2D		L 2D		H B4
	M 35		M 35		L B5
	A 97		B 0B		M B6
	B 90		D 0B		RET C9
	C 91		C 0B		RNZ C0
	D 92		D 0B		RNC D0
	E 93		E 0B		RC D8
	H 94		H 0B		RPO E0
	L 95		L 0B		RPE E8
DCR	M 96		M 0B		RM F8
	A 97		D 1B		DCX D1B
	B 98		H 2B		DCR D2B
	C 99		C 99		DCR D3B
	D 9A		D 9A		DCR D4B
	E 9B		E 9B		DCR D5B
	H 9C		H 9C		DCR D6B
	L 9D		L 9D		DCR D7B
	M 9E		M 9E		DCR D8B
	DAA* 27		CMA 2F		DAA 2F
SBB	CMA† 37		STC† 37		STC 37
	DAA* 27		CMC† 3F		CMC 3F
	CMA 2F		CMC 2F		CMC 2F
	STC† 37		RC 07		RC 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
SBB	DAA* 27		STC† 37		STC 37
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
SBB	DAA* 27		STC† 37		STC 37
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
SBB	DAA* 27		STC† 37		STC 37
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
SBB	DAA* 27		STC† 37		STC 37
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
SBB	DAA* 27		STC† 37		STC 37
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
SBB	DAA* 27		STC† 37		STC 37
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
SBB	DAA* 27		STC† 37		STC 37
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
SBB	DAA* 27		STC† 37		STC 37
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
SBB	DAA* 27		STC† 37		STC 37
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
SBB	DAA* 27		STC† 37		STC 37
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		RR 07
	DAA* 27		RR 07		RR 07
	CMA 2F		RR 07		RR 07
SBB	DAA* 27		STC† 37		STC 37
	CMA 2F		RR 07		RR 07
	STC† 37		RR 07		RR 07
	CMC† 3F		RR 07		